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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/506,595	09/03/2004	Lars Hindersson	P13055-US1	1395

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ERICSSON INC.
6300 LEGACY DRIVE
M/S EVR 1-C-11
PLANO, TX 75024

EXAMINER	
LEE, ANDREW CHUNG CHEUNG	
ART UNIT	**PAPER NUMBER**
2619	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/506,595	HINDERSSON, LARS	
	Examiner	Art Unit	
	Andrew C. Lee	2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 September 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *9/03/2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/3/2007, 9/3/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action in response to the Application 10506595 filed on 9/03/2004 is entered. Claims 1 – 17 are hence entered and presented for examination.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). ***Information Disclosure Statement***

3. The information disclosure statement (IDS) submitted on 1/03/2007, 9/03/2004 was filed, and the submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Specification

4. The abstract of the disclosure is objected to because the abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text. Correction is required. See MPEP § 608.01(b).

5. The disclosure is objected to because of the following informalities:

Regarding claims 1 – 17, the claimed subject matters have been modified/amended to “audio device”, “audio frames”, and “audio packets”, respectively. However, the specification and the drawings (Fig. 1, Fig. 4, Fig. 5a,

Fig. 5b, and Fig. 6) still indicate "sound device", “sound frames”, and “sound packets”. Clarification is required; and

Appropriate correction is required.

Drawings

6. The drawings (Fig. 1, Fig. 4, Fig. 5a, Fig. 5b, and Fig. 6) are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claimed subject matters “audio device”, “audio frames”, “audio packets” as disclosed in claims 2, 3, 8, 9, 10, 11, 13, 14, 15, 16, respectively must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet”

pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1, 4, 6, 8, 12, 13, 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Katseff et al. (US 6301258 B1).

Regarding claim 1, Katseff et al. disclose a device for handling asynchronously transferred digital packets on a network ("PC-based packet phone" interpreted as a device for handling asynchronously transferred digital packets; Fig.1, co. 3, lines 5 – 22), comprising: a network connection for exchanging digital packets with the network and an associated personal computer (PC) ("I/O port" and "to connect to a packet network" interpreted as a network connection; Fig. 1, col. 4, lines 1 – 13); a control connection between the device and the PC for transferring control signals and for connecting a telephony application, resident on the PC, to the device via the network connection ("PPP

used for communicating over a packet network, and TCP/IP is typically used for control and setup" interpreted as a control connection between the device and the PC; col. 3, lines 50 – 56) wherein the device comprises; a software frame buffer for buffering the digital packets ("data conversion buffer"; Fig. 1, col. 3, lines 20 – 22); a coder/decoder (codec) connected to the buffer for decoding the digital packets (packets ("CODEC"; Fig. 1, col. 3, lines 20 – 22) and a digital-to-analog-analog-to-digital (D/A-A/D) converter connected to the codec, for converting the digital packets into an analog signal ("element 112, Sound A/D, D/A"; Fig. 1,col. 3, lines 5 – 22).

Regarding claim 4, Katseff et al. disclose the device according to claim 2, wherein the codec device is a hardware device ("Codec may be either a hardware or software"; col. 3, lines 26 – 30).

Regarding claim 6, Katseff et al. disclose the device according to claim 2, wherein the buffer is arranged to receive a control signal on the control connection from the telephony application, which control signal determines the width of the buffer (col. 3, lines 31 – 37).

Regarding claim 8, Katseff et al. disclose a method for handling a digital audio signal with a personal computer (PC), the PC including a telephony application which is connected both to a network and to an audio a sound device (Fig.1, co. 3, lines 5 – 22), the method including: exchanging audio packets which are asynchronously transferred over the network ("PC-based packet phone" interpreted as a device for handling asynchronously transferred digital packets; Fig.1, co. 3, lines 5 – 22); transferring the audio packets asynchronously

through the PC between the telephony application and the audio device (col. 3, lines 37 – 43); buffering the audio packets in a frame buffer in the audio device (col. 3, lines 20 – 22, col. 4, lines 34 – 44); decoding audio frames in the audio packets in a codec device ("decompresses the audio data"; col. 4, lines 64 – 67, col. 5, line 1); and digital-to-analog (D/A) converting the decoded audio frames ("D/A converter"; col. 5, lines 1 – 5).

Regarding claim 12, Katseff et al. disclose the method according to claim 8 including: indicating whether the frame buffer is overfilled; and speeding up the codec device when the buffer is overfilled (Fig. 3, Fig. 4A, col. 7, lines 9 – 11).

Regarding claim 13, Katseff et al. disclose the method according to claim 8, wherein the telephony application has a control connection to the audio device, the method including: determining in the telephony application the width of the frame buffer ("a given threshold"; col. 4, lines 36 – 44); and controllinq the frame buffer width by a control signal on the control connection from the telephony application (col. 4, lines 45 – 52).

Regarding claim 15, Katseff et al. disclose a method for handling of a digital audio signal in connection with a personal computer PC, the PC including a telephony application which is connected both to a network and to an audio a sound device (Fig.1, co. 3, lines 5 – 22), the method including: A/D converting an analog audio signal into a digital audio signal in the audio device (col. 3, lines 20 – 23); coding the digital audio signal and forming audio frames (col. 3, lines 23 – 26, 37 – 43); forming audio packets which are transferred asynchronously

through the PC between the telephony application and the audio device (col. 3, lines 26 – 35).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 2, 3, 9, 10, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katseff et al. (US 6301258 B1) in view of Chang et al. (US 6330247 B1).

Regarding claim 2, Katseff et al. disclose the device according to claim 1, wherein the codec and the frame buffer exchanges audio frames (col. 3, lines 20 – 22) and

Katseff et al. do not disclose explicitly the codec device includes an auxiliary codec for generating audio frames to be inserted in a stream of audio frames.

Chang et al. in the same field of endeavor teach the codec device includes an auxiliary codec for generating audio frames to be inserted in a stream of audio frames ("AUX DSP and Codec"; Fig. 1, element 116 and 120, col. 4, lines 22 – 26).

At time the invention was made it would have been obvious to a person of

ordinary skill in the art to modify the teachings of Katseff et al. to include the features of the codec device includes an auxiliary codec for generating audio frames to be inserted in a stream of audio frames as taught by Chang et al. One of ordinary skill in the art would be motivated to do so for providing a novel and improved method and apparatus for communicating both voice and control data between a communication device (such as a cellular phone) and an external accessory (such as a hands-free kit) (as suggested by Chang et al., see col. 2, lines 14 – 17).

Regarding claim 3, Katseff et al. do not disclose explicitly the device according to claim 2, wherein the auxiliary codec is arranged to predict audio frames and replace frames from lost audio packets with the predicted frames.

Chang et al. in the same field of endeavor teach the device according to claim 2, wherein the auxiliary codec is arranged to predict audio frames and replace frames from lost audio packets with the predicted frames (col. 4, lines 39 – 51).

At time the invention was made it would have been obvious to a person of ordinary skill in the art to modify the teachings of Katseff et al. to include the features of the device according to claim 2, wherein the auxiliary codec is arranged to predict audio frames and replace frames from lost audio packets with the predicted frames as taught by Chang et al. One of ordinary skill in the art would be motivated to do so for providing a novel and improved method and apparatus for communicating both voice and control data between a communication device (such as a cellular phone) and an external accessory

(such as a hands-free kit) (as suggested by Chang et al., see col. 2, lines 14 – 17).

Regarding claim 9, Katseff et al. disclose the method according to claim 8, wherein the codec device includes a codec and the method includes: following in the codec a stream of audio frames (col. 3, lines 20 – 26); generating audio frames in the codec in dependence on the stream of audio frames (col. 3, lines 27 – 43); and inserting the generated audio frames into the stream of audio frames (col. 3, lines 44 – 44 – 47).

Katseff et al. do not disclose explicitly wherein the codec device includes an auxiliary codec and the method includes: following in the auxiliary codec a stream of audio frames; generating audio frames in the auxiliary codec in dependence on the stream of audio frames; and inserting the generated audio frames into the stream of audio frames.

Chang et al. in the same field of endeavor teach wherein the codec device includes an auxiliary codec and the method includes: following in the auxiliary codec a stream of audio frames (Fig. 1, col. 4, lines 39 – 51); generating audio frames in the auxiliary codec in dependence on the stream of audio frames (col. 4, lines 22 - 26); and inserting the generated audio frames into the stream of audio frames (col. 4, lines 30 – 37).

At time the invention was made it would have been obvious to a person of ordinary skill in the art to modify the teachings of Katseff et al. to include the features of wherein the codec device includes an auxiliary codec and the method includes: following in the auxiliary codec a stream of audio frames; generating

audio frames in the auxiliary codec in dependence on the stream of audio frames; and inserting the generated audio frames into the stream of audio frames as taught by Chang et al. One of ordinary skill in the art would be motivated to do so for providing a novel and improved method and apparatus for communicating both voice and control data between a communication device (such as a cellular phone) and an external accessory (such as a hands-free kit) (as suggested by Chang et al., see col. 2, lines 14 – 17).

Regarding claim 10, Katseff et al. disclose the method according to claim 9, including: predicting audio frames in dependence on the stream of audio frames; and inserting predicted audio frames for frames in lost audio packets (col. 5, lines 17 – 25).

Regarding claim 11, Katseff et al. disclose the method according to claim 9 including: indicating whether the frame buffer is temporarily empty; and inserting generated noise audio frames when the buffer is empty ("Buffer will also typically empty", "silence suppression"; col. 5, lines 17 – 25).

11. Claims 5, 16, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katseff et al. (US 6301258 B1) and Chang et al. (US 6330247 B1) as applied to claims 1, 8, 15 above, and further in view of Staudacher et al. (5657384).

Regarding claim 5, Katseff et al. disclose implicitly the device according to claim 2, wherein the D/A-A/D converter is a full duplex converter ("audio in, audio out"; Fig. 1). Katseff et al. and Chang et al. do not disclose explicitly

wherein the D/A-A/D converter is a full duplex converter.

Staudacher et al. in the same field of endeavor teach wherein the D/A-A/D converter is a full duplex converter ("full duplex speakerphone"; Fig. 5a, Fig. 5b, col. 6, lines 23 – 40).

At time the invention was made it would have been obvious to a person of ordinary skill in the art to modify the teachings of Katseff et al. and Chang et al. to include the features of wherein the D/A-A/D converter is a full duplex converter as taught by Staudacher et al. One of ordinary skill in the art would be motivated to do so for providing method and apparatus for implementing full duplex operation in a low-cost consumer speakerphone that provides perceptibly complete suppression of all the undesirable artifacts of full duplex operation due to signal reflections and delays in the signal paths (as suggested by Staudacher et al., see col. 5, lines 20 – 24).

Regarding claims 16, 17, Katseff et al. disclose implicitly the method according to claims 8, 15, wherein the audio device operates in full duplex ("audio in, audio out"; Fig. 1).

Katseff et al. and Chang et al. do not disclose explicitly wherein the audio device operates in full duplex.

Staudacher et al. in the same field of endeavor teach wherein the audio device operates in full duplex ("full duplex speakerphone"; Fig. 5a, Fig. 5b, col. 6, lines 23 – 40).

At time the invention was made it would have been obvious to a person of ordinary skill in the art to modify the teachings of Katseff et al. and Chang et al. to

include the features of wherein the audio device operates in full duplex as taught by Staudacher et al. One of ordinary skill in the art would be motivated to do so for providing method and apparatus for implementing full duplex operation in a low-cost consumer speakerphone that provides perceptibly complete suppression of all the undesirable artifacts of full duplex operation due to signal reflections and delays in the signal paths (as suggested by Staudacher et al., see col. 5, lines 20 – 24).

12. Claims 7, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katseff et al. (US 6301258 B1) and Chang et al. (US 6330247 B1) as applied to claims 1, 8, 15 above, and further in view of Guy et al. (5657384).

Regarding claims 7, 14, Katseff et al. disclose the method wherein the telephony application has a control connection to the audio device and the codec device device ("element 127, telephony application"; Fig. 1, col. 3, lines 31 – 43)

Katseff et al. and Chang et al. do not disclose explicitly the codec has at least two codecs, the method including selecting an appropriate one of the codecs by a control signal from the telephony application on the control connection.

Guy et al. in the same field of endeavor teach the codec has at least two codecs, the method including selecting an appropriate one of the codecs by a control signal from the telephony application on the control connection ("elements 206A, 206B, Figure 2, col. 7, lines 59 – 62, col. 8, lines 28 – 47).

At time the invention was made it would have been obvious to a person of

ordinary skill in the art to modify the teachings of Katseff et al. and Chang et al. to include the features of the codec has at least two codecs, the method including selecting an appropriate one of the codecs by a control signal from the telephony application on the control connection as taught by Guy et al. One of ordinary skill in the art would be motivated to do so for providing a system and method for transmitting aural signals across a wide area network (WAN) from a local phone coupled to a computer, e.g., a PC-phone, to a remote phone coupled to a KTS, PBX, or PSTN, for example (as suggested by Guy et al., see col. 3, lines 25 – 28).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Sicher et al. (US 6385195 B2).

b) Preston et al. (US 7151768 B2).

c) Riemann et al. (5892764).

d) Pang et al. (US 20030112758 A1).

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Lee whose telephone number is (571)272-3131. The examiner can normally be reached on Monday through Friday from 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on (571) 272-7884. The fax

phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew C Lee/
Examiner, Art Unit 2619
<9/24/2008>

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/Edan Orgad/
Supervisory Patent Examiner, Art Unit 2619